



MEMORANDUM

To: Yi-an Huang, City Manager

From: Iram Farooq, Assistant City Manager for Community Development
Brooke McKenna, Transportation Commissioner

Date: April 8, 2024

Subject: POR 2024 #17 Report on whether the City has the ability to regulate all electric micromobility devices including electric scooters, electric skateboards on bike paths and public ways or whether such regulation is preempted by State law

In response to the Council Order requesting a report on whether the City has the ability to regulate all electric micromobility devices including electric scooters, electric skateboards on bike paths and public ways or whether such regulation is preempted by State law, we report the following to supplement the opinion provided by the Law Department:

Electric micromobility devices, including electric bicycles (e-bikes), electric scooters (e-scooters), electric skateboards (e-skateboards), one-wheels, and other emerging mobility devices, have the potential to significantly improve the transportation ecosystem in Cambridge. They provide more mobility options for Cambridge residents, workers, and visitors. Micromobility devices offer affordable, low-carbon ways to travel. E-bikes are particularly important for people who may struggle to use non-e bikes, such as people who experience chronic pain or fatigue or other physical limitations and depend on e-bikes to be able to exercise and live with the freedom of mobility.

The City of Cambridge has a long history of policies that reduce single-occupancy vehicle trips, starting with the 1992 Vehicle Trip Reduction Ordinance. These policies have enabled our city to grow a healthy economic base while remaining livable and addressing the challenges of climate change. Supporting bicycling as a sustainable and healthy transportation mode continues to be a cornerstone of these policies and is further strengthened by the emergence of e-bikes and other micromobility options.

Our focus on supporting e-bikes and other micromobility devices as first-choice travel modes aligns with the shift towards prioritizing active and sustainable transportation at both the State and Federal levels. The Federal Highway Administration (FHWA) promotes micromobility, including e-bikes and e-scooters, to support overall goals for transportation equity, active transportation for health, and environmental sustainability. *"Micromobility is an important component of a safe, equitable, healthy, accessible, connected, and reliable multi-modal transportation system."*

The popularity of micromobility – and in particular e-bikes and e-scooters – has grown tremendously over the past few years, locally, nationally, and internationally. As one example: After e-bikes were introduced into the Bluebikes system in mid-December, about 175,000 trips were taken in the three winter months following. Current data shows that e-bikes trips represent 30% of all trips taken although they are only about 18% of the bicycle fleet.

Addressing Environmental and Climate Change Issues: Promote Sustainable Transportation and Reduce SOV

Private automobile transportation is the biggest contributor to greenhouse gas emission from transportation within Cambridge's borders. Replacing car trips with e-bike trips can provide substantial climate benefitsⁱⁱ. Research show that in North America, about 60% of e-bike trips replace car tripsⁱⁱⁱ. Further supporting the value of e-bikes is evidence that people who use e-bikes cycle more often and for longer distances^{iv}.

Cambridge Policies and Ordinances that support promotion of bicycling/sustainable transportation include the Vehicle Trip Reduction Ordinance (1992); the Parking and Transportation Demand Management Ordinance (1998); the Climate Protection Plan (2002); the School Wellness Policy (2013, updated annually); the Complete Streets Policy (2016); Vision Zero (2016); the Cycling Safety Ordinance (2019 and 2020); Envision Cambridge (2019); and City Council Goals^v.

Supporting People of All Ages, Abilities, and Identities^{vi}

Making bicycling a safe and accessible form of transportation for people of all ages, abilities, and identities is a fundamental part of Cambridge's transportation policy. Achieving this requires addressing physical and structural barriers that limit access to bicycling for some people. E-bikes are particularly valuable in enabling certain populations and users to choose to bicycle. They enable people with physical limitations to bike, including older people and people with disabilities^{vii}. E-Cargo Bikes make it easier for people to travel with children and to transport goods^{viii}. E-bikes also make longer and hillier trips possible, and those who use e-bikes do take longer trips and bicycle more often during the week. E-bikes have also been shown to be particularly appealing to female cyclists^{ix}, which helps address the gender gap in travel options for women.

In the City's own "Healthy Aging and Cycling" program, offered to Cambridge residents ages 60 and older by the Community Development Department and Cambridge Council on Aging, several participants articulated how meaningful it was that they had the option for e-bikes, enabling them to ride more often and for further distances. It made the difference for them to choose to ride.

More Equitable and Affordable Transportation

Many people with lower incomes lack mobility options. E-bikes and e-scooters are more flexible than transit, significantly less expensive to own and operate than cars, and easier to park/store. There are also many incentive programs for e-bikes

purchases available to people with low incomes, so getting an e-bike can make travel more affordable and give people better access to jobs, health care, childcare, shopping, and other destinations. And e-bikes are now available for both short and longer distance trips through the Bluebikes bikeshare system.

E-bikes and e-scooters provide additional sustainable mobility options for people who do not or cannot drive. This includes people who are too young to drive, who cannot afford a car or cannot afford the cost of parking, or who have physical limitations that disallow automobile driving but do allow for micromobility vehicle use.

Supporting Businesses and Providing Delivery Options

E-Cargo bikes are a useful option for small businesses for deliveries and other needs; they are nimble and flexible and less impactful to the city and the environment than traditional trucks and other delivery vehicles, including cars. Services like UPS, Amazon, etc. have started using e-cargo delivery vehicles in urban areas. Boston currently has a program using e-cargo delivery^x that is already proving popular.

Operational and Safety Considerations

Having safe places to travel— specifically separated bike lanes on major roads and off-road multiuse paths -- remains the single most important factor in enabling people to choose to bicycle. Lack of safe places to ride is the number one barrier people cite for why they might not ride even though they desire to. Experience in Cambridge^{xi} and around the world demonstrates that once safer and more supportive networks are in place, there is a substantial increase in the number of people bicycling, including older people and children.

Further, the increase in paths and separated bike lanes, coupled with decreases in speed of motor vehicle travel, has been associated with significant safety improvements^{xii}, especially reducing the severity of injuries, in line with our Vision Zero objectives.

One specific safety consideration concerns where people are riding bicycles and scooters. It is critical to ensure that major roads have high quality separated bike lanes so that people are not tempted to ride on sidewalks. It is understandable that people will choose to ride on sidewalks when roadway conditions feel unsafe and not conducive to traveling as a vulnerable road user. Fortunately, we have seen in Cambridge that sidewalk riding falls dramatically with the implementation of separated bicycle lanes^{xiii}; this is the key solution to supporting people's choices for using micromobility while providing a more comfortable space for people walking. It is also important to note that State law G.L. c. 90 §1 prohibits riders from operating e-bikes on sidewalks. and Cambridge Traffic Regulations prohibit cycling on sidewalks in business districts.

Micromobility Speeds

In terms of e-bikes, Massachusetts law has established a speed limit of 20 mph. Bluebikes e-bikes are currently capped at 18 mph. Evidence indicates that when speed restrictions are unreasonably low, more people will ride on sidewalks, whether or not there are bans in place.

Experiences across the country and the world have shown that for e-scooter users are safest and make the most sense operating similarly to bicycle riders; in particular, on paths and separated bike lanes. It is safest for operational speeds to be similar, typically 15-20 MPH. If e-scooter speeds are kept artificially low, people will ride on the sidewalks. This was reflected in a study^{xiv} looking at e-scooter experiences in Washington D.C. where e-scooters are limited to 10 MPH and Austin, TX where they are limited to 20 MPH. While riders overwhelmingly rode in bike lanes where they were available in both cities, D.C. riders were 51 percent more likely than Austin riders to choose to ride on the sidewalk where there were no bike lanes present.

Operational Consistency

It is important for laws and regulations to be as consistent as possible for everyone's safety and understanding. Cambridge is part of a very dense region, where people cross jurisdictional lines constantly. It makes travel smoother and safer for everyone when the expectations are consistent; this is why Cambridge Traffic Regulations closely mirror state regulations.

ⁱ <https://www.fhwa.dot.gov/environment/micromobility>

ⁱⁱ <https://doi.org/10.1016/j.trd.2020.102482>

ⁱⁱⁱ <https://nitc.trec.pdx.edu/research/project/1041>

^{iv} <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7456196/>

^v <https://www.cambridgema.gov/departments/citycouncil>

^{vi} <https://usa.streetsblog.org/2023/11/15/study-e-bikes-can-be-a-key-mobility-tool-for-the-disabled-and-seniors-if>

<https://www.sciencedirect.com/science/article/pii/S2590198223001872>

<https://www.health.harvard.edu/staying-healthy/gearing-up-for-electric-bikes>

<https://www.nadtc.org/news/blog/e-bikes-increase-mobility-access-for-older-adults-and-people-with-disabilities/>

<https://pubmed.ncbi.nlm.nih.gov/29649069/>

<https://www.sciencedirect.com/science/article/pii/S2590198222001658#ab010>

^{vii} <https://usa.streetsblog.org/2023/11/15/study-e-bikes-can-be-a-key-mobility-tool-for-the-disabled-and-seniors-if>

^{viii} <https://www.sciencedirect.com/science/article/pii/S2590198222001658#ab010>

^{ix} <https://pubmed.ncbi.nlm.nih.gov/29649069/>

^x <https://www.boston.gov/departments/transportation/boston-delivers>

^{xi} https://www.cambridgema.gov/-/media/Files/CDD/Transportation/Bike/bikereports/20231023bicyclingincambridgedatareport_final.pdf

^{xii} https://www.cambridgema.gov/-/media/Files/CDD/Transportation/Bike/bikereports/20231023bicyclingincambridgedatareport_final.pdf

^{xiii} https://www.cambridgema.gov/-/media/Files/CDD/Transportation/Bike/bikereports/20231023bicyclingincambridgedatareport_final.pdf

^{xiv} <https://www.iihs.org/news/detail/low-caps-on-e-scooter-speeds-encourage-sidewalk-riding>

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CITY OF CAMBRIDGE

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April 8, 2024

Yi-An Huang
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Re: *Awaiting Report No. 24-006 of February 12, 2024, requesting a legal opinion from the City Solicitor on what authority the City has to regulate e-bikes on bike paths, bikeways, trails and public ways; what ordinances or regulations other Massachusetts municipalities have adopted for e-bikes; and whether the City has the ability to regulate all e-micromobility devices including e-scooters, e-skateboards on bike paths and public ways.*

Dear Mr. Huang:

I write in response to the above-referenced City Council order (“Council Order”), requesting an opinion from the Law Department regarding what authority the City maintains to regulate electric bicycles on bike paths, bikeways, trails and public ways, what ordinances or regulations other Massachusetts municipalities have adopted for electric bicycles, and whether the City has the ability to regulate all electric micromobility devices such as electric scooters and electric skateboards on bike paths and public ways.

I. BACKGROUND

A) “Motorized scooter law”

On November 18, 2004, the Massachusetts legislature passed Chapter 396 of the Acts of 2004, which defined and regulated the operation of "motorized scooters". Before the law's enactment, so-called mini-bikes, or mini-motorcycles, had not been defined or contemplated under the state's statutory and regulatory schemes.

The law added a definition of “motorized scooters” in G.L. c. 90, §1, which are: “any 2 wheeled tandem or 3 wheeled device, that has handlebars, designed to be stood or sat upon by the operator, powered by an electric or gas powered motor that is capable of propelling the device with

or without human propulsion. The definition of ‘motorized scooter’ shall not include a motorcycle, electric bicycle or motorized bicycle or a 3 wheeled motorized wheelchair.” The law also made other changes to G.L. c. 90, §1E, including prohibiting motorized scooter usage after sunset or before sunrise; limiting speeds to 20 MPH; requiring a person to have a valid driver’s license or permit, abide by traffic laws, wear protective headgear, not operate with a passenger; and allowing operation of motorized scooters on public roadways (absent limited access express state highways).

B) “E-bike law”

On August 10, 2022, the Massachusetts legislature passed legislation to update state laws governing e-bikes. Most portions of the law went into effect on November 8, 2022, with the remaining portions (Section (f)) taking effect on January 1, 2023. Before the law’s enactment, municipalities had no mechanism to regulate e-bikes, as e-bikes were included in the definition of “motorized bicycle.” Motorized bicycle riders were treated similarly to street-legal mopeds and motorcycles: riders needed to be licensed and were prohibited from off-street pathways. The lack of a specific designation for e-bikes in state law left it ambiguous regarding where e-bikes could be ridden.

The new law added to G.L. c. 90 §1 new definitions for e-bikes (class 1 and class 2) and also amended the definitions of “motorized bicycle,” “motorcycle,” and “motor vehicle” to exclude e-bikes from those terms. The new law also added a new section under which e-bikes are now categorized the same as bicycles under the law. As a result, e-bike riders must now adhere to the same local, state, and federal laws as operators of traditional bicycles.

The new law uses the existing G.L. c. 90E §1 definitions of “[B]ikeway” and “[B]ike [P]ath”:

- “**Bikeway**” is defined as “**Bike Paths** (a route for the exclusive use of bicycles separated by grade or other physical barrier from motor traffic), **Bike Lanes** (a lane on a street restricted to bicycles and so designated by means of painted lines, pavement coloring or other appropriate markings), and **Bike Routes** (a roadway shared by both bicycles and other forms of transportation designated by the means of signs or pavement markings).”
- “**Bike Path**” is defined as “a route for the exclusive use of bicycles separated by grade or other physical barrier from motor traffic.”

The law now prohibits riders from operating e-bikes on sidewalks and granted municipalities the authority to regulate e-bikes over Bike Paths within its jurisdiction, including setting speed limits. The law also limited e-bike usage and operation on trails¹ unless the municipality with jurisdiction over it after public notice and a public hearing adopts ordinances or regulations permitting such use. Lastly, the new law granted the Massachusetts Secretary of Transportation authority to promulgate regulations for e-bikes in the Commonwealth. As of the date of this response, the state has not yet promulgated such regulations on e-bike usage.

¹ G.L. c.85 §11B ¾ refers to a “[T]rail designated for nonmotorized traffic...if such [T]rail has a natural surface tread made by clearing and grading the soil and no surfacing materials have been added.”

II. OPINION

A) State law explicitly allows the City to regulate e-bikes on Bike Paths and Trails.

As discussed below, the City may prohibit or otherwise regulate e-bikes on Bike Paths. Also, the City may permit and regulate e-bikes on Trails, although if the City does not take affirmative action to permit e-bikes on Trails they are prohibited on Trails.

Under G.L. c.85 §11B 3/4 (c), “[a] municipality, local authority or state agency with jurisdiction over a [B]ike path or [B]ikeway after public notice and a public hearing may adopt ordinances or regulations prohibiting or otherwise regulating the operation of electronic bicycles on such paths, including but not limited to, the imposition of speed limits.” Under G.L. c.85 §11B 3/4 (d), “subject to public notice and a public hearing [the City] may adopt ordinances or regulations permitting or otherwise regulating the use of electric bicycles on such a trail within its jurisdiction, including but not limited to the imposition of speed limits.”

We conducted research to determine the intent of the legislature, concerning whether “such paths”, as appearing in §11B 3/4 (c) refers to Bike Path and Bikeway, or only Bike Path. Based on our research, we believe a reasonable interpretation is that “such paths” is referring only to the previously stated “Bike Path”, and not “Bikeway.” Therefore, G.L. c.85, §11B 3/4 does not explicitly authorize the City to prohibit or regulate e-bikes on Bike Lanes or Bike Routes. That said, the e-bike law is still relatively new and has not been interpreted by the Courts or the Massachusetts Secretary of Transportation, which has authority to regulate e-bikes throughout the Commonwealth, so this interpretation could be altered depending on new guidance and interpretation.

B) State law likely does not preempt the City from regulating e-bikes on Bike Lanes, Bike Routes, and public ways.

Nothing in state law expressly prohibits or preempts a municipality’s regulation of e-bikes on Bike Lanes, Bike Routes, and public ways, and therefore a court would likely uphold a City ordinance or regulation regulating, but not prohibiting, e-bikes on Bike Lanes, Bike Routes, and public ways. A prohibition of e-bikes on Bike Lanes, Bike Routes, and public ways would likely be in sharp conflict with state law because state law gives operators of e-bikes all of the rights and privileges of operators of bicycles. Therefore, because bicycles are permitted on Bike Lanes, Bike Routes, and public ways it would be inconsistent with state law to prohibit e-bikes on Bike Lanes, Bike Routes, and public ways.

G.L. c. 85, § 11B 3/4(b) provides that “...electric bicycle or an operator of an electric bicycle shall be afforded all of the rights and privileges, and shall be subject to all of the duties, of the operator of a bicycle or duties related to a bicycle set forth in sections 11B and 11B½, any general or special law, regulation or local ordinance; provided, however, that electric bicycles shall not be ridden or operated on sidewalks.” Bicyclists and e-bikes users have the right to use all Bike Lanes, Bike Routes, and public ways in Massachusetts, including those public ways without bikeway designations, except limited access or express state highways, where signs specifically prohibiting bicycles have been posted. When riding on Bike Lanes, Bike Routes, and public ways,

bicyclists and e-bikes riders must obey the same basic traffic laws and regulations that apply to bicycles.

Additionally, a court would likely find that the state statutory and regulatory scheme does not prevent the City from further regulating e-bikes on all Bike Lanes, Bike Routes, and public ways. The Home Rule Amendment authorizes the City to enact any ordinance to exercise any power or function which the general court has power to confer on it, not inconsistent with the constitution or state law. Take Five Vending, Ltd. v. Town of Provincetown, 415 Mass. 741, 744 (1993). “In determining whether a local ordinance or by-law is inconsistent with a State statute, we have given municipalities ‘considerable latitude,’ requiring a ‘sharp conflict’ between the ordinance and statute before invalidating the local law.” Id. A conflict “appears when either the legislative intent to preclude local action is clear, or, absent plain expression of such intent, the purpose of the statute cannot be achieved in the face of the local by-law.” Grace v. Brookline, 379 Mass. 43, 54 (1979).

Nothing in §11B 3/4 can be construed as a sharp conflict with the City regulating e-bikes on public ways, due in part because public ways are not contemplated therein. In addition, while §11B 3/4 explicitly grants municipalities the authority to regulate or prohibit e-bikes on Bike Paths, it does not explicitly or otherwise prohibit municipal regulation on Bikes Lanes, Bike Routes, or public ways. However, as alluded to above, §11B 3/4 (f) states that the Massachusetts Secretary of Transportation has the authority to promulgate regulations for e-bikes in the Commonwealth throughout the state, “including but not limited to their safe operation and proper labeling.” So, while nothing in the current state regulatory or statutory scheme preempts or otherwise limits municipal regulation of e-bikes on public ways, the City might consider proceeding with caution unless and until the Secretary of Transportation promulgates said regulations, which would necessitate that any local ordinance or regulation or provision thereof that is in conflict, would need to be amended.

C) The City is likely preempted from regulating e-scooters, e-skateboards, and other e-micromobility devices on Bike Paths.

A court would likely find that municipal regulation of e-scooters, e-skateboards and other e-micromobility devices on Bike Paths is preempted by state law because G.L. c.90E, §1 defines Bike Path as “a route for the exclusive use of bicycles separated by grade or other physical barrier from motor traffic.” The e-bike law uses the G.L. c. 90E, §1 definition of Bike Path, thereby expanding Bike Paths to the exclusive use of bicycles and e-bikes. However, the phrase “exclusive use” would likely be found to be a legislative intent to preclude local regulation of other devices (e-scooter, e-skateboard, other e-micromobility devices) on Bike Paths. Accordingly, the City would need special legislation to regulate e-scooter, e-skateboard, and other e-micromobility usage on Bike Paths.

D) The City can regulate e-scooters on public ways.

Motorized cooters, as defined in G.L. c. 90, §1, includes scooters that are “electric or gas powered.” The above referenced “Motorized Scooter Law” granted authority for the e-scooters to

operate on public roadways. Pursuant to G.L. c.90, §1C “motorized scooters shall comply with all applicable federal motor vehicle safety standards.”

While there is no statutory enumerated grant of authority from the state legislature for municipalities to further regulate motorized scooters, there are no prohibitions either. Thus, applying the same analysis as above regarding the home rule authority, no state law explicitly prohibits municipal regulation of e-scooters on public ways (excluding highways, where motorized scooters are prohibited) as long as it is consistent with the obligations/regulations stated in G.L. c.90, §1C and §1E. However, it would be in conflict with state law for municipalities to prohibit e-scooters from public ways.

E) The City can regulate e-skateboards and other e-micromobility devices on public ways.

E-skateboards and other e-micromobility devices are not defined in state law. Unlike e-scooters, which benefit from a grant of authority from the legislature to operate on public ways, e-skateboards and other e-micromobility devices do not have the same benefit. However, as the legislature has not defined e-skateboards/micromobility devices, nor has it excluded these devices from public ways, it appears that the City can regulate their use on public ways.

F) What have other municipalities done to enforce e-bikes?

Some other municipalities have taken action regarding e-bikes, but what we found was done before the e-bike law. For example, Boston city council’s adopting a resolution supporting the bills before the Massachusetts legislature H.3457/S.2309 in 2022 that ultimately became the E-Bike Law that passed later in 2022. Generally speaking, it does not appear that other municipalities in the greater metro area have adopted ordinances or regulations specific to e-bike usage. (That said, Boston recently launched and regulates an e-cargo bike delivery pilot program².) The lack of local e-bike regulation may be due in part to the fact that municipalities are aware of the Secretary of Transportation’s authority under G.L. c.85 §11B 3/4 to promulgate regulations for e-bikes throughout the Commonwealth, and they are waiting for the state regulations.

Very truly yours,



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Acting City Solicitor

² <https://www.boston.gov/departments/transportation/boston-delivers>